RULANIA / Chemical Technology. Food Industry.   H-28

Abs Jour : Ref. Zhur-Khimiya, No 12, 1958, 41327.

Author   : Ionosku, Ivonesku, Poposku.

Inst   : Agricultural inst.

Title   : Application of corn flour in bread baking.

Orig Pub : Anuarul luorar stiint. Inst, agron,, 1957, 179-190

Abstract : Experimental bread baking from mixtures of wheat and corn
           flour showed that best results were obtained with wheat flour
           $\leq 85\%$ yield with an addition of the corn flour (fine
           milling, of $\leq 40\%$ yield) in the amount not exceeding the
           amount of the sifted off bran.

Card 1/1

IVENSEN, P.A.

Remote control of mine loading and transfer points. Nauch.rab.
VUGI no.11:75-91 '54.   (MLRA 8:11)

1, Chelyabinskiy filial, Vsesoyuznyy nauchnoissledovatel'skyy
institut.
          (Remote control) (Mine haulage)

KASHIRTSEV, Arkadiy Sergeyevich. Prinimali uchastiye: TOLSTYKH, A.N.;
    IVENSEN, T.Yu.; UVAROV, S.V.. STEPANOV, D.L., prof., otv.red.;
    KORDE, K.B., red.izd-va; SUSHKOVA, L.A., tekhn.red.

[Field atlas of the fauna of Permian deposits in the north-
eastern part of the U.S.S.R.] Polevoi atlas fauny permskikh
otlozhenii Severo-Vostoka SSSR. Moskva, Izd-vo Akad.nauk
SSSR, 1959. 84 p.   (MIRA 13:2)
    (Siberia, Eastern--Paleontology, Stratigraphic)

IVENSEN. V. A.

M

13

Methods of Manufacture of Titanium-Aluminium Alloys. S. G. Glazunov and V. A. Ivensen (Tekhnika Vozdushnogo Flota (Tech. Aeronaut. Navy), 1936, (2), 45-65). [In Russian.] The aluminothermic process for producing titanium-aluminium alloys is described, together with methods of micrographic and chemical analysis of such alloys.—N. A.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

IVENSEN, V. A., Engr.   Cand. Tech. Sci.

Dissertation: "Investigation of the Compacting Process During Sintering Single-Phase
Metal Ceramic Products." Moscow Order of the Labor Red Banner Inst of Steel imeni
I. V. Stalin, 17 Jun 47.

SO: Vechernyaya Moskva, Jun, 1947 (Project #17836)

@. A. IVENSEN, V.A.

2

Sintering of one-phase powder-metallurgical bodies. I. V. A. Ivensen (Vsesoyuz. Nauch.-Issledovatel. Inst., Tver-dyi& Splavov). Zhur. Tekh. Fiz. 17, 1301-14 (1947).— Powders of Cu (pptd. with Zn and reduced from the oxide), Ni (reduced from the carbonate), Fe, Co, WC, and TiC, were pressed under different pressures P (from 100 to 15,000, occasionally up to 27,000 kg./sq. cm.) to s.d. d_s and sintered at a const. temp. for a definite length of time to s.d. d_s. The coeff. of relative pore-vol. contraction K is defined by the pore-vol. ratio $K = s_s/s_o$, where the subscripts s and o refer to the pore vol. before and after the sintering, resp. As $s_s = (m_s/d_s) - (m/d_s)$ and $s_o = (m/d_s) - (m/d_s)$, where m = mass of the powder and d_s = d. of the compact (cast) material, $K = d_s(d_s - d_s)/d_s(d_s - d_s)$. With reduced Cu powder, of original bulk sp. wt. 2.8', sintered 30 min. at 800°, K remains const. ~0.64 up to d_s ~5.4 ($P \sim 300$), then increases with further increasing d_s, ($P = 4120$, 6200; 12,400; $d_s = 7.40$, 7.61, 7.90; $K = 0.650$, 1.149, 1.680; resp). Cu shows the same behavior, i.e. const. K up to d_s ~0.41, 6. In short sintering, 25 min. at 1020°, K is const. ~0.41, up to d_s ~6.1; in 6 hrs. sintering at 640°, K ~0.59, const. up to d_s ~4.9. Deviations from constancy, in the direction of K decreasing with increasing d_s, was found with very loosely pptd. Cu powder (0.35 g./cc.); not additionally reduced; deviations in the opposite direction were found with a highly inhomogeneous Cu powder. The same behavior of K, with perhaps a narrower range of const. K as compared with Cu, was found in Ni powders sintered at 710, 740, 730, 815, 840, and 875°, and Fe powders sintered 1 hr. at 1100, 1250, and 1300°. With Co, constancy of K was found only in 20% of the expts.; mostly, K decreases with increasing d_s. WC and TiC showed const. K throughout, and no increase at high compression. The percentage of expti. series in which K varied by less than ± 5% was, for Cu 90, Ni 68, Fe 64, Co 21, WC 89%, and the percentages of runs with K varying within less than 10% was, resp. 97, 84, 78, 36, 100%. Constancy of K was found also in the treatment of data of Goetzel (C.A. 32, 66056) on Mo powder at 1700° ($K =$ 0.077), and on carbonyl Ni. The value of K is a useful index of the tendency of a metal powder to sintering. II. Relation between the final and the initial density as a conse-

quence of the constancy of the relative pore volume contraction. Ibid. 15, 1315-24 (1947).— From the definition of K, one has $d_s = d_s/[d_s + (d_s - d_s)K]$ and $d_s = d_sd_s/[d_s - d_1(1 - K)]$. These relations permit construction of plots of d_s as a function of d_s, and vice versa, with the expti. value of K. Agreement is satisfactory in the range of constancy of K. The relation between d_s/d_o and the vol. contraction ΔV is $\Delta V = 1 - (d_s/d_s) = (1 - K)[1 - (d_s/d_s)]$, and the mean linear contraction is given by $\Delta l =$ $1 - [(d_s/d_s)(1 - K)] + K]^{1/s}$. N. Thon

IVENSEN, V. A.

B

PROCESSES AND PROPERTIES INDEX

Investigation of the Process of Shrinkage of Single-Phase Metal-Ceramic Bodies. III. Laws Determining Volume Changes of Metal-Ceramic Bodies During Firing (Reply to M. Yu. Bal'shin). (In Russian.) V. A. Ivensen. *Zhurnal Tekhnicheskoi Fiziki* (Journal of Technical Physics), v. 18, Oct. 1948, p. 1290-1305. Critically analyzes Bal'shin's textbook, "Powder Metallurgy." Points out several erroneous assumptions. Ivensen's statements are based on his own experimental investigation, data of which are tabulated and charted.

Evaluation B-79119

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

IVENSEN, V. A.

Apr 52

USSR/Metals - Sintering

"Investigating the Consolidation of Metallo-Ceramic Materials During Sintering. VI. Difference in Behavior of Amorphous and Crystalline (Metallic) Porous Materials During Sintering," V.A. Ivensen

"Zhur Tekh Fiz" Vol XXII, No 4, pp 677-685

It was found that the decrease of free energy during sintering is due to shrinking of pores and of porous vols, and in the case of cryst materials it is due to the regeneration of defective lattices. The variation of sintering temp of cryst

216T57

materials leads to a sharp change in the relation of speeds of consolidating processes and processes lowering the free energy. Received 6 Aug 51.

216T57

Ivensen, V. A.

USSR/Metallurgy - Powder Metallurgy,   Jan 53
          Sintering

"Certain Points of the Theory of Sintering in Connection With Theoretical Conceptions of M. Yu. Bal'shin," V. A. Ivensen

Zhur Tekh Fiz, Vol 23, No 1, pp 183-194

Disputes some assumptions accepted by Bal'shin in his works in field of powder metallurgy. Major conclusions are as follows: Bal'shin's notions of inevitable coexistence of processes of compaction and expansion under any conditions of sintering, and his

270M01

theory of zonal isolation are not substantiated neither theoretically nor experimentally; attempts of considering process of compaction simultaneously from various viewpoints, without adequate evaluation of possible influence of individual elementary processes which take place during sintering, lead to complication and vegueness of Bal'shin's theoretical conceptions; formulas suggested for description of compaction process are inadequate; comparison of compaction due to sintering with mech compaction is merely formal and therefore purposeless.

270M01

AUTHOR: Ivensen, V. A.   SOV/126-6-2-32/34

TITLE: Discussion: On the Diffusion Theory of Sintering
            (Diskussiya: O diffuzionnoy teorii spekaniya)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1958, Vol 6, Nr 2,
            pp 370-375 (USSR)

ABSTRACT: The author summarises his conclusions thus:
            1. The diffusion mechanism of densification during
            sintering proposed by B. Ya. Pines and his team (Refs.1,2),
            cannot play any important role in the general process of
            densification during the period of presence in the
            sintered body of inter-communicating porosities.   However,
            there is no reason to assume that the mechanism or
            process which brings about rapid and considerable
            densification during the presence of inter-communicating
            pores ceases completely after the formation of closed
            pores.
            2. The diffusion theory in the form   proposed by Pines
            does not permit explaining high speeds of densification
            of metallic powders by the presence of lattice distortions
            and the formation of additional vacancies, since such an
Card 1/3   explanation contradicts the basic assumption of this theory

SOV/126-6-2-32/34

Discussion: On the Diffusion Theory of Sintering

consisting in the fact that the speed of flow of the
substance is determined not by the total concentration
of vacancies but by their concentration gradient.
3. There is reason to assume that, in the non-uniformly
stressed crystalline body, the concentration of vacancies
after long duration heating will be distributed in
accordance with pressures at various sections of the body.
The diffusion of vacancies should contribute to the
establishment of such correspondence and not disturb it.
It therefore follows that equalisation of the concentration
of vacancies by diffusion can begin only after eliminating
the non-uniform stress state. The possibility of
simultaneous equalisation of the concentration of
vacancies and of the pressure around sections of the
surface with various curvatures without disturbing the
equilibrium state is not clear; this problem requires
special analysis which has not been done by the authors
of the diffusion theory.
4. The theory of Frenkel' (Ref.7) which is based on the
total magnitude of the concentration of vacancies and not
Card 2/3 on the difference in the concentration of the vacancies,

Discussion: On the Diffusion Theory of Sintering   SOV/126-6-2-32/34

supplemented by the conception of "generation" of vacancies during the process of reversion is able to explain to a greater extent the phenomena observed during the process of sintering of real **ceramic metals.However,** this theory does not reveal the atomic mechanism of the process and, therefore, such an explanation of the kinetics of the densification is of semi-phenomenological character.

It is at present not possible to clarify fully the influence of lattice distortions on the speed of densification during sintering, since the atomic mechanism of the flow of metal under low load values has not been sufficiently clarified.

There are 13 references, 10 of which are Soviet, 3 English.

SUBMITTED: November 20, 1956

Card 3/3   1. Sintering   2. Diffusion--Theory

SOV/137-58-10-20812

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 66 (USSR)

AUTHOR: Ivensen, V.A.

TITLE: A New Grade of Hard Alloy, VK6M, for Machining Stainless Steel and Hard Chilled Pig Iron [Novaya marka tverdogo splava VK6M dlya obrabotki nerzhaveyushchey stali i tverdogo (otbelennogo) chuguna]

PERIODICAL: Prom.-ekon. byul. Sov. nar. kh-va Sverdl. ekon. adm. r-na, 1958, Nr 4, p 75

ABSTRACT: VK6M, a new grade of hard alloy, has been developed by VNIITS for machining various stainless steels and hard chilled pig irons. VK6M differs significantly from the hard alloys VK6 and VK8 by its low porosity (< 0.05%), its extremely fine granular structure (most of the grains are under one micron) and the uniform distribution of Co. Thanks to these properties, VK6M alloy is of high strength and resistance to wear.

Z.V.

1. Tool steel--Development   2. Tool steel--Materials
--Stainless steel--Machining

Card 1/1

PHASE I BOOK EXPLOITATION   SOV/5581

Moscow. Dom nauchno-tekhnicheskoy propagandy.

Vysokoproizvoditel'nyy rezhushchiy instrument [sbornik] (Highly
    Productive Cutting Tools; Collection of Articles) Moscow,
    Mashgiz, 1961. 354 p. Errata slip inserted. 10,000 copies
    printed.

Sponsoring Agency: Obshchestvo po rasprostraneniyu politicheskikh
    i nauchnykh znaniy RSFSR. Moskovskiy dom nauchno-tekhnicheskoy
    propagandy imeni F. E. Dzerzhinskogo.

Ed. (Title page): N. S. Degtyarenko, Candidate of Technical
    Sciences; Ed. of Publishing House: I. I. Lesnichenko; Tech.
    Ed.: Z. I. Chernova; Managing Ed. for Literature on Cold
    Treatment of Metals and Machine-Tool Making: V. V. Rzhavinskiy,
    Engineer.

PURPOSE : This collection of articles is intended for technical
    personnel of machine, instrument, and tool plants.

Card 1/6

Highly Productive Cutting Tools (Cont.)   SOV/5581

COVERAGE: The collection contains information on the following: new brands of high-speed steels and hard alloys; designs of built-up tools and tools for the machining of holes; tools for machining heat-resisting and light-metal alloys and plastics; tools for unit-head machines and automatic production lines; and methods for the sharpening and maintenance of carbide-tipped tools. No personalities are mentioned. There are 56 references, mostly Soviet. References accompany some of the articles.

TABLE OF CONTENTS:

Card 2/6

Highly Productive Cutting Tools (Cont.)   SOV/5581

Card 5/6

IVENSEN, V.A.

Strength of ceramic-metal hard alloys. Porosh. met. 1
no.5:26-32 S-O '61.   (MIRA 15:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tverdykh
splavov.
                    (Ceramic metals--Testing)

18.9500
15 2240

26566

S/126/61/012/002/018/019
E032/E514

AUTHORS: Ivensen, V.A., Koval'skiy, A.Ye, Semenovskaya, S.V. and Eyduk, O.N.

TITLE: On the anisotropy of the elastic properties of tungsten monocarbide

PERIODICAL: Fizika metallov i metallovedeniye, 1961, Vol.12, No.2, pp.299-300

TEXT: In view of the difficulties in the production of single crystals of tungsten monocarbide and the determination of their properties, the present authors have investigated the anisotropy of its elastic properties using a single crystal of WC-Co (10 wt.% cobalt). It is known that reversible (i.e.elastic) thermal stresses occur in two-phase alloys as a result of differences in the thermal expansion coefficients of the two phases. In the present work the absolute magnitude of the stresses was measured using the УРС-50 (URS-50) diffractometer with Co K_β radiation. The latter radiation was employed in order to exclude effects associated with the doublet structure of $K_{\alpha 1 \alpha 2}$. The displacement of the "centre of gravity" of the lines

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due to the specimen, relative to the lines due to a free specimen
of tungsten carbide, was measured. In addition to this shift, a
determination was made of the "structural" width of the β line due
to the nonuniformity of the thermal stresses. The width of the
lines obtained after the removal of the cobalt phase (by means of
hydrochloric acid) was subtracted from the total width, since the
removal of cobalt removes the thermal stresses. The subtraction
was carried out with the aid of a linear formula. It was found
that as the direction of the crystallographic plane approaches the
c-axis, the elastic modulus increases. For example, the elastic
modulus along the c-axis is greater than that along the a-axis by
a factor of 1.5. Assuming a three-dimensional stress state, it is
concluded that the tungsten carbide lattice in the alloy is
compressed, which is in agreement with all the published models
describing thermal stresses in the two-phase system (Ref.2:
G. P. Zaytsev, FMM, 1956, 2, No.3, 494; Ref.3: W. Spath: Metall.
1958, No.10; Stahlbau, 1958, 24, No.3; Ref.5: J. Gurland, J.Trans.
ASM., 1958, 50, 1063). The cobalt lattice, on the other hand,
should be in a stretched state. It is pointed out, however, that

Card 2/3

26566

On the anisotropy of the elastic ...   S/126/61/012/002/018/019
E032/E514

the anisotropy may also be due to the fact that the thermal
expansion coefficient is not the same in all directions. However,
according to A. M. Belikov (Ref.10: Dissertation, MIS, 1958)
the expansion coefficient along the a and c axes is in fact
practically the same (3.84×10^{-6} and 3.90×10^{-6}).   There are
1 table and 10 references: 7 Soviet and 3 non-Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut
tverdykh splavov (All Union Scientific Research
Institute for Hard Alloys)

SUBMITTED: March 11, 1961

Card 3/3

TRET'YAKOV, Vsevolod Ivanovich. Prinimali uchastiye: CHAPOROVA, I.N.,
    kand. tekhn. nauk; KOVAL'SKIY, A.Ye., kand. khim. nauk;
    BARANOV, A.I., inzh.; MEYERSON, G.A., prof., doktor tekhn.
    nauk, retsenzent; IVENSEN, V.A., kand. tekhn. nauk, retsenzent;
    BABICH, M.M., inzh., retsenzent; OL'KHOV, I.I., red.; MISHARINA,
    K.D., red. izd-va; DOBUZHINSKAYA, L.V., tekhn. red.

    [Ceramic-metal hard alloys; physicochemical principles of their
    production, properties and fields of use] Metallokeramicheskie
    tverdye splavy; fiziko-khimicheskie osnovy proizvodstva,
    svoistva i oblasti primeneniia. Moskva, Gos.nauchno-tekhn.izd-
    vo lit-ry po chernoi i tsvetnoi metallurgii, 1962. 592 p.
                                                    (MIRA 15:1)
                (Ceramic metals)

IVENSEN, V.A.; KOVAL'SKIY, A.Ye.

Dependence of the electric resistance of a tungsten carbide-cobalt
alloy on its structure. Fiz. met. i metalloved. 13 no.5:793-794
My '62.   (MIRA 15:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tverdykh
splavov.
          (Tungsten-Cobalt alloys—Electric properties)

ACCESSION NR: AP4015266   S/0226/64/000/001/0056/0064

AUTHORS: Ivensen, V. A.; Eyduk, O. N.

TITLE: The structure of two-phase solid cermet alloys

SOURCE: Poroshkovaya metallurgiya, no. 1, 1964, 56-64

TOPIC TAGS: WC Co alloy, carbide phase structure, cobalt phase structure, binary
cermet alloy, cermet, Co phase microscopic analysis, WC phase microscopic analysis

ABSTRACT: A discussion concerning the structure of WC-Co alloys is presented.
It starts with a short review of the opinions expressed by other authors and a
criticism of their conclusions. According to previous investigations, the
analyses made with electron microscope showed that the carbide phase appeared
to be continuous while the cobalt phase was concentrated in the inclusions,
seemingly isolated from each other. However, this isolation was observed only
in the polished sections. On the other hand, the fact that cobalt was removed from
the alloy by the action of hydrochloric acid pointed to the existence of connec-
tions between the isolated cobalt areas. The authors believe that the degree of
carbide grain coalescence depends on the differences in the technical process
involved, and they claim that the cobalt "interlayers" between the carbide grains

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ACCESSION NR: AP4015266

affect the physical nature of the material. It is concluded that the degree of carbide grain coalescence should be regarded as a very important structural characteristic of the alloy studied and that it should be accounted for (together with such other structural characteristics as the grain size, etc) in determining the physical properties of the WC-Co alloy. Orig. art. has: 7 photographs.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut tvardy#kh splavov, Moscow (All-Union Scientific Research Institute of Hard Alloys)

SUBMITTED: 13Feb64   DATE ACQ: 12Mar64   ENCL: 00

SUB CODE: ML   NO REF SOV: 009   OTHER: 008

Card 2/2

ACCESSION NR: AP4044910   S/0226/64/000/004/0043/0057

AUTHOR: Ivensen, V.A., Eyduk, O.N., Pivovarov, L.Kh.

TITLE: Some regularities in the deformation of sintered hard alloys of WC-Co

SOURCE: Poroshkovaya metallurgiya, no. 4, 1964, 43-57

TOPIC TAGS: sintered alloy, powder alloy, tungsten carbide, hard alloy, cobalt alloy, tungsten carbide alloy, alloy deformation, plastic deformation, alloy structure, yield point

ABSTRACT: It has recently been established that there is no direct relationship between the bending strength of a hard alloy and its notch toughness, and this fact has attracted interest to phenomena connected with the deformation of hard alloys. However, the relative deformations of the cobalt and the carbide phases and their separate roles in the total deformation process have not yet been clarified. In order to fill this gap, the present authors investigated the hard alloy WC-Co with respect to plastic deformation and its dependence on the composition (6-50% Co) and structure (fine grain and coarse grain). Prismatic test specimens (10x10x20 mm) of the hard alloy were deformed under the influence of gradually increasing uniaxial compressive loads. The residual

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ACCESSION NR: AP4044910

deformation was measured by an optimeter and the yield point was determined from logarithmic stress-strain curves, corresponding to a permanent strain of 0.1%. The lateral faces of the specimens were ground and polished before the tests, and some of the specimens were subjected to X-ray investigations before and after deformation. Such specimens were annealed at 800C before deformation to remove the strain-hardening effect produced by the grinding. The width of the radiospectrographic lines was measured by the ionization method. Grain size and angle of disorientation were computed from the number and size of the reflexes obtained photographically. These studies revealed plastic deformation of the tungsten carbide grains, as indicated by numerous bands of slippage appearing on the surface of the grains after deformation, as well as by an increase in the number of reflexes on the X-ray picture. The yield point of the hard alloy was found to be directly proportional to the relative value of the contact surface of the tungsten carbide grains. The resistance to deformation of the alloy in the initial stages is determined mainly by the resistance to deformation of the carbide skeleton. It is only after further deformation that the resistance to deformation of the strain-hardened cobalt phase is manifested. The mechanism of deformation of the carbide skeleton of the alloy does not differ in principle from that of a polycrystalline

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ACCESSION NR: AP4044910

metal. Orig. art. has: 4 graphs, 15 photomicrographs and 6 tables.

ASSOCIATION: Vsesoyuzny*y nauchno-issledovatel'skiy institut tverdy*kh splavov
(All-Union Scientific Research Institute of Hard Alloys)

SUBMITTED: 15Aug63   ENCL: 00   SUB CODE: MM

NO REF SOV: 003   OTHER: 006

Card 3/3

IVENSEN, V.A.; EYDUK, O.N.; PIVOVAROV, L.Kh.

Regularities of the deformation of Wc-Co ceramic metal hard alloys.
Porosh.met. 4 no.4:43-57 Jl-Ag '64.   (MIRA 18:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tverdykh splavov.

IVENSEN, V.A.; GOL'DBERG, Z.A.; EYDUK, O.N.; FAL'KOVSKIY, V.A.

Resistance of a hard alloy to fracture under shock loads.
Porosh.met. 5 no.12:69-72 D '65.

(MIRA 19:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tverdykh
splavov. Submitted February 13, 1965.

L 20667-66   EWT(d)/EWT(m)/EWP(w)/T/EWP(t)/IWP(k)   IJP(e)   JD/HW/EM

ACC NR: AP6001477   SOURCE CODE: UR/0226/65/000/012/0069/0072

AUTHOR: Ivensen, V. A.; Gol'dberg, Z. A.; Eyduk, O. N.; Fal'kovskiy,
V. A.

ORG: All-Union Scientific Research Institute of Hard Alloys (Vsesoy-
uznyy nauchno-issledovatel'skiy institut tverdykh splavov)

TITLE: Resistance of a hard alloy to failure under impact loads

SOURCE: Poroshkovaya metallurgiya, no. 12, 1965, 69-72

TOPIC TAGS: plastic deformation, mechanical shock resistance, specific
resistance, compressive strength, ultimate stress, bending stress,
data analysis, tungsten containing alloy, failure

ABSTRACT: The effect of plastic deformation of a hard alloy on its
resistance to failure under impact loads was analyzed. It was shown
that despite the relatively low value of plastic deformation, the
latter has a great effect on the efficiency of the hard-alloy load.
This was corroborated by experimental data characterizing the efficiency
of a very coarse-grained and a medium-grained alloy with 20% Co. The
resistance to failure and efficiency of the coarse-grained alloy is
much greater than that of the medium-grained alloy despite the higher
ultimate bending and compression strengths of the latter. The differ-

Card 1/2

L 20667-66

ACC NR: AP6001477

ence in tool efficiency is explained by the greater deformability of the coarse-grained alloy. Orig. art. has: 1 table. [Based on author's abstract]   [NT]

SUB CODE: 11, 20/   SUBM DATE: 13Feb65/   ORIG REF: 003/   OTH REF: 001

Card 2/2 BK

IVENSEN, V.A.

Effect of conditions of preparation on the strength of WC – Co
hard alloys and connection between the strength of these alloys
and their structure and composition. Porosh.met. 3 no.3:37-51
My-Je '63.   (MIRA 17:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tverdykh splavov.

IVENSEN, YU.T.

Ca

8

PROCESSES AND PROPERTIES INDEX

The polymetallic deposit Ak-Tyus in the Zailiiskii Alatau. Yu. P. Ivensen. *Razvedka Nedr (Subterranean Prospecting)* 4, No. 1, 17-22(1935). A detailed geological description of the district is given. Among the most important minerals detected are sphalerite, chalcopyrite, galena and cassiterite. The av. compn. of a sample of ore was: SiO_2 47.11, TiO_2 0.52, Al_2O_3 6.33, CaO 3.92, MgO 0.50, MnO 0.25, BaO 0.12, K_2O 1.37, Na_2O 0.08, H_2O 3.00, P_2O_5 0.19, F 0.14, Cl 0.21, S 8.09, Pb 8.42, Cu 1.46, As 0.37, Sn 0.17, Zn 2.30, Fe 8.20%. Sb, Se, Te, Ni, Co, W, V, Mo, Au, Os, Ir, Ga, Tl and Ge are absent, while In is present in traces. The Ag content is 103 g. per ton.
          A. A. Rochtlingk

METALLURGICAL LITERATURE CLASSIFICATION

IVENSEN, YU. P.

Polymetallic ores of Central Asia and Southern Kazakhstan Moskva, Glavnaia redaktsiia litera-
tury po tsvetnoi metallurgii, 1957. 279 p. (44-1036C)

QE315.I8

IVENSEN, Yu.P.

Eighth scientific session of the "Yakut Branch of the Academy
of Sciences of the U.S.S.R. Izv.AN SSSR.Ser.geol. 21 no.8:127
Ag '56.   (MLRA 9:11)
      (Yakutia--Geology--Congresses)

AUTHOR: Ivensen, Yu.P.   11-8-13/14

TITLE: Letter to the Editorial Office of the Magazine "Izvestiya
               AN SSSR, Seriya Geologicheskaya" (V redaktsiyu zhurnala
               "Izvestiya AN SSSR, Seriya Geologicheskaya")

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geologicheskaya, 1957,
               # 8, p 111 (USSR)

ABSTRACT: The author refers to his paper published in # 3, 1957, this
               magazine, whose reference list omitted G.G. Rodionov's paper
               on "the mechanism of shaping pegmatite veins", published in
               1956. The author confirms Rodionov's priority and corrects
               his omission by publishing the present letter.

SUBMITTED: 28 May, 1957

AVAILABLE: Library of Congress

Card 1/1

Defense of Dissertations. 30-12-36/45
January - July 1957.
Section of Geological-Geographical Sciences
(Vest. AN SSSR, 1957, V.27, No.12 p 113-115)

sostava i mekhanicheskikh svoystv merzlykh gruntov ot
temperatury i davleniya). Application for the degree of
Candidate of Geographical Sciences: N. G. Bobrov - The
peculiar features of the mass of rocks frozen for many
years and their accompanying formations in the Southern
Koryak district and on Northern Kamchatka (Osobennosti
tolshchi mnogoletnemerzlykh gornykh porod i soputstvuyushchikh
im obrazovaniy v Yuzhno-Koryakskoy strane i na Severnoy
Kamchatke).
→ At the Instute for the Geology of Ore Deposits, Petrography,
Mineralogy, and Geochemistry (Institut geologii rudnykh
mestorozhdeniy, petrografii, mineralogii i geokhimii).
Applications for the degree of Doctor of Geological-
Mineralogical Sciences: Yu. P. Ivensen - The forming of
granite pegmatites in connection with the development of
geological structure. (Stanovleniye granitnykh pegmatitov
v svyazi s razvitiyem geologicheskoy struktury). A. S.
Povarennykh - crystallochemical bases of the modern text
book of Mineralogy (Kristallokhimicheskiye osnovy sovremennogo

Card 1/1

IVENSEN, Yu.P.

Studying the genesis of granitic pegmatites. Izv.vost.fil.AN SSSR
no.7:15-21 '57.   (MIRA 10:10)

1. Yakutskiy filial AN SSSR.
                            (Pegmatites)

IVENSEN, Yu.P.

Formation of structural and morphological types of pegmatite veins.
Izv.AN SSSR.Ser.geol. 22 no.3:36-47 Mr '57.   (MLRA 10:5)

1.Yakutskiy fialial AN SSSR.
                       (Pegmatites)

FISHMAN, M.V.; SIMAKOV, G.V.; GOLDIN, B.A.; IVENSEN, Yu.F., otv.red.;
MOROZOVA, A., otv.za vypusk; TSIVUNIN, I., tekhn.red.

[Granitoid intrusions in the upper Bol'shoy Patok, Malyy Patok,
and Torgovaya Valleys (Polar Urals) and the related mineralization]
Granitoidnye intruzii verkhovii Bol'shogo Patoka, Malogo Patoka
i Torgovoi (Pripoliarnyi Ural) i sviazannoe s nimi orudenenie.
Syktyvkar, Komi knizhnoe izd-vo, 1960. 99 p. (Akademiia nauk
SSSR. Komi filial, Syktyvkar. Institut geologii. Trudy, no.1).
(MIRA 15:8)

(Ural Mountains--Rocks, Igneous)
(Ural Mountains--Ore deposits)

DEVYATOVA, Eleonora Ivanovna; MARKOV, K.K., doktor geogr. nauk, prof.,
otv. red.; IVENSEN, Yu.P.., doktor geol.-mineral. nauk, otv.
red.; SHENGER, I.A., red. izd-va; ZENDEL', M.Ye., tekhn. red.

[Stratigraphy of Quaternary sediments and paleogeography of the
Quaternary period of the Onega basin] Stratigrafiia chetver-
tichnykh otlozhenii i paleogeografiia chetvertichnogo perioda v
basseine reki Onegi. Moskva, Izd-vo Akad. nauk SSSR, 1961. 88 p.
                                        (MIRA 14:8)
    (Onega Valley—Paleogeography) (Onega Valley—Geology, Stratigraphic)

CHALYSHEV, Vasiliy Ivanovich; IVENSEN, Yu.P., doktor geologo-miner. nauk,
   otv. red.; TSVETKOV, N.V., red. izd-va; BOCHEVER, V.T., tekhn. red.

[Stratigraphy and lithology of Permian and Triassic lagoonal and
terrestrial deposits in central Pechora] Stratigrafiia i litologiia
lagunno-kontinental'nykh otlozhenii permi i triasa Srednei Pechory.
Moskva, Izd-vo Akad.nauk SSSR, 1961.   102 p.   (MIRA 14:6)
         (Pechora Valley—Geology, Stratigraphic)
             (Pechora Valley—Petrology)

IVENSEN, Yu.P., doktor geol.-miner. nauk, otv. red.; KULIKOV, M.V.,
red. izd-va; ZENDEL', M.Ye., tekhn. red.

[Materials on the geology and petrography of the Timan Ridge and
Kanin Peninsula] Materialy po geologii i petrografii Timana i po-
luostrova Kanin. Moskva, Izd-vo Akad. nauk SSSR, 1961. 146 p.
(MIRA 14:11)

1. Akademiya nauk SSSR. Komi filial, Syktyvkar. Institut geologii.
(Timan Ridge—Geology)

VIKHERT, A.V.; VOZIN, V.F.; IVENSEN, Yu.P.; KASHIRTSEV, A.S.; PROSHCHENKO,
     Ye.G.; CHEPIKOVA, I.M., red.izd-va; GUS'KOVA, O.M., tekhn.red.;
MAKAGONOVA, I.A., tekhn.red.

[Geology and ore potential of the western Verkhoyansk Range]
Geologicheskoe stroenie i rudonosnost' Zapadnogo Verkhoian'ia.
Moskva, Izd-vo Akad.nauk SSSR, 1961. 210 p. (Akademiia nauk
SSSR. IAkutskii filial, Yakutsk. Trudy, no.5).   (MIRA 15:2)
                    (Verkhoyansk Range--Geology)
                 (Verkhoyansk Range--Ore deposits)

IVENSEN, Yu.P.

Bol'shoy Kameshek and Sopki Kamennyye granite massifs (northern
Timan Ridge). Trudy Inst.geol. Komi fil. AN SSSR no.2:73-90
'62.   (MIRA 15:7)

(Timan Ridge—Granite)

PUSTOVALOV, L.V., otv. red.; AL'TGAUZEN, M.N., doktor geol.-min.
        nauk, red.; DOLGOFOLOV, N.N., red.; IVENSEN, Yu.P.,
        doktor geol.-min. nauk, red.; VLASOV, K.A., doktor
        geol.-min. nauk, red.; POZHARITSKIY, K.L., doktor geol.-
        min, nauk, red.; SERDYUCHENKO, D.P., doktor geol.-min.
        nauk, red.

    [Metals in sedimentary formations; ferrous metals, non-
    ferrous light metals] Metally v osadochnykh tolshchakh;
    chernye metally, tsvetnye legkie metally. Moskva, Izd-vo
    "Nauka," 1964. 443 p.   (MIRA 17:8)

    1. Akademiva nauk SSSR. Laboratoriya osadochnykh poleznykh
    iskopayemykh. 2. Chlen-korrespondent AN SSSR (for Pustovalov,
    Vlasov).

IVERSKAYA, A. M.

"Critical Review of Foreign Post-War Pediatric Literature," Pediatrics, No. 3, 1949, Moscow

IVENSKAYA, A-M.

FEIGINA, S. IA., IVENSKAIA, A. M.

Combined tuberculosis and diphtheria vaccination. Probl. Tuberk.,
Moskva No. 6, Nov.-Dec. 50. p. 42-4

1. Of the Pediatric Clinic of the Academy of Medical Sciences
(Tuberculosis Division) (Scientific Director—Prof. I. V. Tsimbler)
and of the Institute for the Control of Bacterial Preparations
imeni Tarasevich (Scientific Director—P. F. Zdrodovskiy, Active
Member of the Academy of Medical Sciences).

CIML 20, 3, March 1951

IVENSKAYA. A.M.; MOSKACHEVA, K. A.

Streptomycin therapy of general miliary tuberculosis in
children.. Sovet. med. no.10:13-17 Oct 1951.   (CIML 21:1)

1. Candidate Medical Sciences Ivenskaya; Candidate MedicalSciences
Moskacheva. 2. Of the Clinic for Tuberculosis (Head -- Prof.
I. V. Tsimbler), Institute of Pediatrics of the Academy of
Medical Sciences USSR (Director -- Honored Worker in Science
Prof. G. N. Speranskiy).

IVENSKAYA, A.M., kandidat meditsinskikh nauk.

Early prophylactic therapy for primary infection with antibiotics.
Sovr.probl.tub. 5 no.5:3-7 '54.   (MIRA 8:1)
        (Antibiotics) (Tuberculosis)

IVENSKAYA, A.M. (Po dannym otechestvennoy i zarubezhnoy literatury)

Present state of the problem of treating tuberculous infection
with antibiotics in its early stage in children and adolescents.
Prob.tub.no.4:72-76 Jl-Ag '55.   (MLRA 8:10)
        (TUBERCULOSIS, ther.
            in child. & adolescents, review)

IVENSKAYA, A.M., kandidat meditsinskikh nauk

Brazilian (De Assis) method of BCG vaccination; from materials of
periodical literature. Sov.probl.tub. 6 no.2:3-17 '55. (MLRA 8:7)
     (BCG VACCINATION, administration,
          De Assis method, review)

IVENSKAYA, H. M.

ARUTYUNOV, V.Ya., prof.; BERKOVICH, I.M., doktor med.nauk; BUNIN, K.V., prof.
VELIKORETSKIY, A.N., prof.; GAMBURG, R.L., doktor med.nauk; GLASKO,
N.M.; ZVYAGINTSEVA, S.G., doktor med.nauk; IVENSKAYA, A.M., kand.med.
nauk; KALUGINA, A.N, kand.med.nauk; KAMINSKAYA-PAVLOVA, Z.A., prof.
KVATER, Ye.I., prof.; KOLEN'KO, A.B., prof.; KOSSYURA, M.B., kand.
med.nauk; KRAVETS, N.M., doktor med.nauk; KRISTMAN, V.I., kand.med.
nauk; KRUZHKOV, V.A., dotsent; LIKHACHEV, A.G., prof.; LUKOMSKIY, I.G.,
prof.; MASHKOVSKIY, M.D., prof.; ROZENTAL', A.S., prof.; SEREYSKIY,
M.Ya. [deceased], prof.; TURETSKIY, M.Ya., kand.med.nauk; KHESIN,
Ye.Ye., dotsent; EMDINA, Kh.L., kand.med.nauk; SHABANOV, A.N., prof.;
red.; BONDAR', Z.A., red.; ZAKHAROVA, A.I., tekhn.red.

[Medical handbook for feldshers] Meditsinskii spravochnik dlia
fel'dsherov. Izd. 6-oe, perer. i dop. Moskva, Gos. izd-vo med.
lit-ry, 1957. 899 p.   (MIRA 10:12)
           (MEDICINE--HANDBOOKS, MANUALS, ETC.)

IVENSKAYA, N., referent.

Assembly line method for the heat treatment of sheet steel (from "Iron Age" no. 18, 1955). Stal' 16 no.12:1140-1141 D '56. (MIRA 10:9)
(United States--Steel--Heat treatment)   (Sheet steel)

SOV/137-57-1-1145

Translation from: Referativnyy zhurnal. Metallurgiya, 1957, Nr 1, p 148 (USSR)

AUTHOR: Ivenskaya, N. D.

TITLE: Application of Metallic Coatings in a Gaseous Medium (Naneseniye metallicheskikh pokrytiy v gazoobraznoy srede)

PERIODICAL: Tekhnol. transp. mashinostroyeniya, 1956, Nr 3, pp 70-75

ABSTRACT: A survey of "Steel" magazine for 1953 and 1955 on the plating (P) of articles with metals obtained from a gaseous phase (GP). A description is given of the chemism of the process, the equipment used, and the properties of the P obtained from a GP. A comparison of the processes of gaseous and galvanic P and the application of gaseous P are adduced. The following three composite tables are adduced: 1) Properties of carbonyls of different metals; 2) ductility and resistance to oxidation of various P deposited from GP of metals as well as carbides, nitrides, borides, silicides, and oxides; 3) the purposes of specific P.

M. Z.

Card 1/1

IVENSKAYA, N.D.

From pages of foreign journals. Metalloved. 1 obr. met. no.9:
61-63 S '56.   (MLRA 9:11)

(Bibliography--Metallurgy)

SOV-129-58-6-17/17

AUTHOR: Ivenskaya, N. D.

TITLE: Non-Russian Literature on Equipment for Heat Treatment and High Temperature Alloys (Oborudovaniye dlya termicheskoy obrabotki)

PERIODICAL: Metallovedeniye i Obrabotka Metallov, 1958, Nr 6, pp 63-64 (USSR)

ABSTRACT: List containing 7 references on equipment for heat treatment and 11 references on high temperature alloys.

1. Literature - USSR   2. Alloys   3. Induction heating - Equipment

Card 1/1

USCOMM-DC-55498

28(4)
AUTHOR: Ivenskaya, N. D., Abstracter   SOV/32-25-9-28/53

TITLE: Abstract. Improvement in the Methods of Producing
             Mirror-finished Metallographical Samples (Metall Progress, X,
             1958, Vol 78, Nr 5, p 145)

ABSTRACT: This is an abstract from the afore-mentioned article, published
             in the periodical mentioned in the subtitle, including a diagram
             of the instrument described (Fig). There is 1 figure.

Card 1/1

DONSKOY, Al.V., doktor tekhn. nauk, prof.; DONSKOY, An.V.;
DRESVIN, S.V.; IVENSKIY, G.V.; KUKHTIN, A.M.; LEYBIN,
Yu.V.; MONDRUS, D.B.; SOLOMAKHIN, I.M.; FRUMKIN, A.A.;
BALASHOV, V.A., retsenzent

[High-frequency electrothermy; a handbook] Vysokochastot-
naia elektrotermiia; spravochnik. Moskva, Mashinostroenie,
1965. 564 p.   (MIRA 18:6)

DONSKOY, Aleksandr Vasil'yevich; IVERSKIY, Grigoriy Vasil'yevich;
FOSSE, A.V., kand. tekhn. nauk, retsenzent; MONDRUS, D.B.,
kand. tekhn. nauk, retsenzent; SORODINOV, V.V., red.

[Electrothermal systems with electronic converters with in-
creased frequency] Elektrotermicheskie ustanovki s ionnymi
preobrazovateliami povyshennoi chastoty. Moskva, Izd-vo
"Energiia," 1964. 209 p.   (MIRA 17:6)

PA 254T48

IVENSKIY, G. V.

Apr 53

USSR/Electricity - Instruments
          High-Frequency Heating

"High-Frequency Voltmeter for Industrial Electrical
Equipment," A. V. Konskoy, Cand Tech Sci, Engr G. V.
Ivenskiy

Prom Energet, No 4, pp 13-15

Describes (with circuit diagram, graph of character-
istics, photo) simple, cheap hf vacuum-tube voltmeter
for frequencies up to 10 mc, accurate enough for in-
dustrial hf uses. Meter has been given theoretical
and exptl testing at Lab of Elec Furnaces of Leningrad

254T48

Polytech Inst and "Sevzappromelektropech'" enterprise.
It can be built by non-specialized enterprises. Uses
one double diode (i.e., a 30Ts68 or 6Kh6).

254T48

IVENSKIY, G. V.

Electrical Engineering Abst.
Vol. 57 No. 676
Apr. 1954
Electrical Engineering

DR
81715†

621.317.784.029.5

1525. Rectifying wattmetter for high-frequency electrothermal equipment. A. V. DONSKOI AND G. V. IVENSKII. *Elektrichestvo*, 1953, No. 10, 46–50. *In Russian.*

It is important to establish accurately the efficiency of an r.f. equipment, its power being usually developed in an output resonant circuit. Of all the known methods including those utilizing square-law characteristics of valve amplifiers and rectifiers, the most satisfactory one is the system employing linear-law thermionic or metal rectifiers with electrodynamic wattmeter as indicator, and determining power as the difference between squared currents or voltages which correspond to those developed across the matched load. The principle of the circuit is shown and analysed; it consists of 4 rectifiers, two working in parallel and the other two in a biphase circuit, with RC combinations as detector loads. Formulæ for component values are derived, and a vector diagram explaining the operation is constructed. The full circuit, including the primary and secondary transformer windings of the electrodynamic wattmeter and the effect of their mutual inductance, is then described and illustrated by a practical example. In the frequency range of 10^2–10^4 c/s the instrument is accurate within 8% provided that the waveforms are sinusoidal.

A. LANDMAN

SHLYAPOSHNIKOV, Boris Moiseyevich, professor; IVENSKIY, G.V., redaktor;
VORONETSKAYA, L.V., tekhnicheskiy redaktor.

[Laboratory manual on electronic and ionic devices] Rukovodstvo
k laboratorii elektronnykh i ionnykh ustroistv. Moskva, Gos.
energ. izd-vo, 1954. 299 p.   (MLRA 7:11)
        (Electronics)

IVENSKIY, G. V.

DONSKOY, A.V.;   IVENSKIY, G.V.;   FRUMKIN, A.A.

Large-capacity electromagnetic voltage stabilizers. [Izd.]
LONITOMASH no.33:299-312 '54.   (MIRA 8:2)
        (Voltage regulators)

DONSKOY, Aleksandr Vasil'yevich, doktor tekhn.nauk; IVENSKIY, Grigoriy
Vasil'yevich, inzhener; ACHKINADZE, Sh.D., red.; FREGER, D.P.,tekhn.red.

[Stabilized anode rectifier for electrothermal equipment; practices
of "Sevzappromelektropich'" and the M.I.Kalinin Polytechnic Institute
in Leningrad] Stabilizirovannyi anodnyi vypriamitel' dlia elektro-
termicheskikh ustanovok; iz opyta "Sevzappromelektropech'" i LPI
imeni M.I.Kalinina. Leningrad, 1956. 14 p. (Leningradskii dom
nauchno-tekhnicheskoi propagandy. Informatsionno-tekhnicheskii
listok, no.19. Elektricheskie metody obrabotki metallov) (MIRA 10:12)
(Electric current rectifiers)

AUTHOR: Ivenskiy, G. V.

TITLE: Investigation of a Grid-Controlled Rectifier Unit That Supplies the Electron-Tube Oscillator of an Electrotehrmal Installation

ABSTRACT: A rectifier unit intended for supplying a high-frequency electrothermal installation and designed with a 3-phase bridge circuit and with a grid-controlled cathode group is analyzed for the cases of presence and absence of a rectifying device in the neutral. It is assumed that the transformer-winding resistance is zero and the load is purely resistive. On the basis of a grapho-analytical solution of a set of equations, rectifier current and voltage curves are plotted and its control characteristics are computed. The estimated data well agrees with the experimental data obtained from a type LGPZ-60, 60-kw

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8(4), 9(0)   SOV/112-59-2-3698

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1959, Nr 2,
    pp 209-210 (USSR)

AUTHOR: Donskoy, A. V., Borok, A. M., and Ivenskiy, G. V.

TITLE: Ionic Frequency Converters for Electrothermal Installations
    (Ionnyye preobrazovateli chastoty dlya elektrotermicheskikh ustanovok)

PERIODICAL: V sb.: Prom. primeneniye tokov vysokoy chastoty. Riga, 1957,
    pp 273-286

ABSTRACT: A 60-kw ionic frequency converter for electrothermal installations
    developed by LII imeni M. I. Kalinin is described. Its output frequency is
    2,500-2,800 cps. Its scheme has an implicit DC circuit. Six TR1-15/15
    thyratrons are connected on their cathode side in three groups of two and
    connected to the three-phase rectifying transformer; on their anode side, they
    are arranged in two groups of three each and connected to the terminals of a
    single-phase inverter transformer. A smoothing choke coil is connected

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Ionic Frequency Converters for Electrothermal Installations

between the neutrals of both transformers. An oscillatory circuit formed by
the furnace inductor and the phase-control capacitor serves as a load for the
converter The grid-control circuit of the inverter is fed from the converter
output via an RC phase shifter. The self-control feature secures the following:
(1) an automatic frequency control as the circuit parameters change in the
course of metal heating; and (2) short-circuit protection upon collapse of
inverter oscillations. However, an additional special device to open the valves
for starting is required. When the power is adjusted by the phase shifter, the
inverter-transformer ratio is changed and the firing-point-controlling
capacitors are switched simultaneously. In the schemes with an explicit DC
circuit, the rectifier grid control can be used advantageously. Experimental
regulating and load characteristics of the converter are presented. It is pointed
out that in schemes with higher frequencies, it is expedient to prolong the
recovery time for the valves. Another solution is to use a converter with a

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Ionic Frequency Converters for Electrothermal Installations

triple output frequency; its briefly presented scheme is a combination of three single-phase inverters whose inverter-transformer secondaries are connected in open delta. Bibliography: 10 items.

V.A.L.

Card 3/3

Ivenskiy

110-12-13/19

AUTHOR: Ivenskiy, G.V., Engineer.

TITLE: The Power Factor of Industrial Electrical Thermal Install-
ations with Valve Generators (Koeffitsiyent moshchnosti
promyshlennykh elektrotermicheskikh ustanovok s lampovymi
generatorami)

PERIODICAL: Vestnik Elektropromyshlennosti, 1957, Vol.28, No.12,
pp. 44 - 48 (USSR).

ABSTRACT: High-frequency industrial heating installations commonly
use a three-phase thyratron circuit. To simplify the grid
control circuit, only the cathode group of valves is controlled.
In order to increase the power-factor at large ignition angles,
use is made of a zero valve, its anode connected to the zero
point of the rectifier transformer and its cathode to the
common cathode of the rectifier. This article determines the
power-factor of the rectifier without making assumptions about
the wave- shape of the rectified current and also determines
the influence of the zero valve on the power-factor.
Amongst other assumptions, zero losses and magnetisation
current in the rectifier transformer, and zero voltage drop
in the valves are postulated.
Current and voltage curves for rectifiers with and without
zero valves are plotted in Figs. 2 and 3. Three cases are

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110-12-13/19

The Power Factor of Industrial Electrical Thermal Installations
with Valve Generators.

plotted when a zero valve is used according to the value of
the ignition angle and two corresponding cases are plotted for
the case when there is no zero valve. Analytical expressions
are derived for the active power and the power-factor. Graphs
showing the relationship between the power-factor of a recti-
fier and the regulation factor are given in Fig.5 for an
installation type ЛГП-60. The experimental curves lie some-
what below the theoretical value, because of the assumptions
upon which the calculation is based. The results plotted in
Figs. 4 and 5 indicate that the zero valve has an appreciable
influence on the power-factor of the rectifier for ignition
angles greater than $70 - 80°$. Further increase in the angle
greatly increases the effectiveness of the zero valve. The
use of the zero valve is, therefore, most advantageous when it
is frequently necessary to use very low rectified voltages.
There are 5 figures and 2 Slavic references.

ASSOCIATION: Leningrad Works for High-frequency Installations
(Leningradskiy Zavod Vysokochastotnykh Ustanovok)
SUBMITTED: November 13, 1956.

AVAILABLE: Library of Congress.
Card 2/2

Ivenskiy, G. V.

110-4-14/25

AUTHORS: Donskoy, A.V., Doctor of Technical Sciences, Professor,
              Borok, A.M., Ivenskiy, G.V., and Khansuvarov, A.A., Engineers.

TITLE: A High-frequency Electro-thermal Installation of a New
              Series (Vysokochastotnaya elektrotermicheskaya ustanovka
              novoy serii)

PERIODICAL: Vestnik Elektropromyshlennosti, 1958, No. 4,
              pp. 42 - 47 (USSR).

ABSTRACT: High-frequency electro-thermal installations with valve
              generators for induction-heating are widely used. A mass-
              produced equipment has lacked anode voltage stabilisation and
              needs careful screening to reduce radio interference. A new
              series of equipment has been developed that operates at a
              frequency of 70 kc/s, so that both the fundamental and the
              second harmonic are outside the standard frequency range for
              radio interference. This new equipment, type ЛПЗ-67, employs
              a stabilised anode-controller rectifier. The main technical
              data are given with a full-circuit diagram in Fig.1 and the
              main components of the circuit are described: the rated output
              is 60 kW. The principles of the grid control system are des-
              cribed. A change of the grid voltage varies the firing angle of
              the valve. The main advantage of the circuit is its simplicity
              and although the accuracy of stabilisation is less than that
Card1/2 of existing circuits, it is nevertheless adequate. The equipment

110-4-14/25

A High-frequency Electro-thermal Installation of a New Series

includes protection against short-circuit, overload and under-
voltage. A general view of the equipment is given in Fig.2.
It is housed in a number of separate cubicles, whose contents
are described.
A wide range of tests was made on the equipment; its character-
istics are given in Fig.3. These curves show that the generator
tor can easily be adjusted to give the best operating conditions
on the most varied loads. The oscillatory power ranges from
40 - 60 kW and the efficiency of the generator valve is 72 - 78%.
The power-factor depends on the ignition angles of the thyratron
and ranges from 0.72 - 0.93. During the tests careful measure-
ments were made of radio-interference with the results plotted
in Fig.4, which shows that interference is worst at light-loads
but is still within the specified limits even when the cubicle
doors are open.
There are 4 figures, and 3 Russian references.

ASSOCIATION: The Leningrad Works for High-frequency Installations
               (Leningradskiy zavod vysokochastotnykh ustanovok)

SUBMITTED: October 18, 1957

AVAILABLE: Library of Congress
Card 2/2

8(3)
AUTHORS: Donskoy, A. V., Doctor of Technical Sciences, SOV/105-59-7-10/30
              Ivenskiy, G. V., Candidate of Technical Sciences, Borok, A. M.,
              Engineer

TITLE: Ion Frequency Converters for Induction Heating Installations
              (Ionnyye preobrazovateli chastoty dlya ustanovok induktsionnogo
              nagreva)

PERIODICAL: Elektrichestvo, 1959, Nr 7, pp 41 - 45 (USSR)

ABSTRACT: The USSR industry at present produces large thyratrons of the
              TRI-15/15-type within a sufficiently short time for the re-establishment
              of the controllability of the grid. Investigations show that they
              operate with sufficient reliability in frequency converters of
              50/2500   cycles. The wiring diagrams of these converters are
              given. As the basic wiring diagrams of similar converters have
              already been dealt with by the papers of references 1 and 2, the
              auxiliary circuits are in this case mainly investigated. Figure 1
              shows the wiring of an ion frequency converter of 50/2500 cycles and
              60-80 kw with a direct current term, which is described. It has
              been used for the melting of metal since July 1957 at the
              Laboratoriya elektrotermicheskikh ustanvok LEI im. Kalinina
Card 1/3   (Laboratory for Electrothermal Installations at the

Ion Frequency Converters for Induction Heating Installations SOV/105-59-7-10/30

LPI im. Kalinina (Leningrad Polytechnic Institute imeni Kalinin).
The rectifier of this converter is a three-phase single-cycle
rectifier with 3 valves and one converter. The inverter is constructed
as a single-phase single-cycle inverter with 2 valves and 1
converter. It is shown that an inverter for 2500 cycles embodied
within the thyratron mentioned must necessarily be a single-cycle
inverter. Regulation of the initial output P_k is brought about by
variation 1) of the capacity of the capacitor C_k, 2) of the phase

shift angle φ between the grid- and anode voltages of the
thyratrons of the inverter group, and 3) of the economy transformer
coupling of the load circuit $L_k C_k$ with the inverter-transformer.

The experimentally obtained characteristics of the converter
corresponding to these three kinds of regulation are shown by
figure 2. The disadvantage of the 1. and 2. method is the stepped
regulation. Apart from the circuit shown by figure 1, where one
valve group is used only for rectification and the other only for
inverting the current, also ionic converters with a direct current
element (Refs 1, 2) may be used in electrothermal installations. In
this case the same valves are used for rectification and inversion.
Such a converter, consisting of a three-phase one-cycle rectifier

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Ion Frequency Converters for Induction Heating Installations SOV/105-59-7-10/30

and a single-phase one-cycle inverter with 60-80 kw is shown by figure 4. This inverter was investigated in the above laboratory, where it was used for a long period. The life of the thyratrons TRl-15/15 of the converter group is, as shown by experience, about 800 - 900 hours. There are 5 figures and 5 Soviet references.

ASSOCIATION: Leningradskiy politekhnicheskiy institut im. Kalinina (Leningrad Polytechnic Institute imeni Kalinin)

SUBMITTED: May 16, 1958

Card 3/3

DONSKOY, Aleksandr Vasil'yevich, doktor tekhn.nauk, prof.; IVENSKIY,
Grigoriy Vasil'yevich, kand.tekhn.nauk

Autonomous parallel inverter with doubled frequency output. Izv.
vys. ucheb. zav.; elektromekh. 3 no.3:125-139 '60. (MIRA 13:10)

1. Kafedra elektrifikatsii promyshlennykh predpriyatiy i ustanovok
Leningradskogo politekhnicheskogo instituta (for Donskoy).
2. Vedushchiy inzhener Osobogo konstruktorskogo byuro elektroter-
micheskogo oborudovaniya Leningradskogo sovnarkhoza (for Ivenskiy).
            (Pulse techniques (Electronics))

i

DONSKOY, Aleksandr Vasil'yevich; IVENSKIY, Grigoriy Vasil'yevich; MONDRUS,
D.B., red.; FREGER, D.P., izd.red.; BELOGUROVA, I.A., tekhn.red.

[New induction heating systems with ionic frequency converters]
Novye elektrotermicheskie ustanovki s ionnymi preobrazovateliami
chastoty. Leningrad, 1961. 39 p. (Leningradskii Dom nauchno-
tekhnicheskoi propagandy. Obmen peredovym opytom. Seriia: Elektri-
cheskie metody obrabotki metallov, no.1).

(MIRA 14:6)

(Induction heating)

37961
S/137/62/000/005/017/150
A006/A101

/. /7/0

AUTHORS: Donskoy, A. V., Ivenskiy, G. V.

TITLE: Experimental series of electric melting units with thyratron
             frequency changers for 2,500-cycle frequency

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 5, 1962, 51, abstract 5V304
             (V sb. "Vysokochastotn. elektrotermich. ustanovki", Moscow-Leningrad,
             Gosenergoizdat, 1961, 23-40)

TEXT: High efficiency, low idle-run power, and a number of other advant-
ages distinguish positively ion frequency changers from other converter types
employed in electrothermics. In 1955, the Central Designing Office for Ultra-
sonic and High-Frequency Units (TsKB UVU) and the Leningrad Polytechnic Institute
imeni M. I. Kalinin (LPI) started investigations on the possibility of designing
new medium-power (60 - 80 kw) ionic frequency changers for 2,500 cycles. The
investigations have shown that domestic TP1-6/15 (TRI-6/15) and TPI-15/15 (TRI-
15/15) type thyratrons can operate on the frequency indicated. Experimental
semi-industrial electric melting units were developed with thyratron frequency
changers with a distinctly marked d-c link. The latest unit is used at the LPI

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S/137/62/000/005/017/150
A006/A101 .

Experimental series of electric melting ...

from 1957 for the production of magnetic alloys. Positive results in operating this unit made it possible to develop at the TsKB UVU a series of electric melting units with ТП -62 (TP-62) and ТП -162 (TP-162) type thyratron frequency changers. In 1959, the Leningrad Plant of High-Frequency Units assimilated series production of TP-62 units. In 1962, a TP-162 type unit was produced and is now being tested for industrial use. Ionic frequency changers have in both units a clearly marked d-c link and consist of a three-phase single-cycle rectifier and a single-phase, single-cycle, self-excited inverter. Voltage at the rectifier output (in the inverter circuit) is 3 kv. The basic differences between TP-162 and TP-62 are: 1. In PT-62 both the rectifier and the inverter are assembled on TRI-15/15 type thyratrons. In TP-162 the rectifier is assembled on three TRI-40 (15) type thyratrons and the inverter on four TRI-15/15 type thyratrons. 2. TR-162 is equipped with two melting furnaces. 3. In TP-162 there is a possibility of changing the coefficient of autotransformation on the furnace k_T, to regulate the output power. Therefore the rated furnace voltage is almost twice as high as the rated voltage of the secondary winding of the inverter transformer, and amounts to 1,500 v. Unlike as in PT-62, there is no possibility of changing the transformation coefficient of the inverter transformer k_T. The authors mention some other distinuishing features of the units, and

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Experimental series of electric melting ...

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A006/A101

present electric circuit diagrams for both units, parameters of the equipment, and operational characteristics of a parallel self-excited inverter. There are 12 references.

D. Kashayeva

[Abstracter's note: Complete translation]

Card 3/3

IVENSKIY, G.V.; POSSE, Z.V.; SLONIM, M.A.

Twelve-phase bridge rectifier with series connection of primary
transformer windings. Izv. NIIPT no.8:83-110 '61.   (MIRA 15:7)
(Electric current rectifiers)
(Electric power distribution--Direct current)

S/105/62/000/007/003/004
E194/E455

AUTHORS: Donskoy, A.V., Doctor of Technical Sciences, Professor,
            Ivenskiy, G.V., Candidate of Technical Sciences
                                                    (Leningrad)

TITLE: Medium-frequency ionic generators for induction
            heating

TEXT: The output frequency of ionic generators is limited by the
control-grid recovery time and may range from some hundreds to
some thousands of cycles/sec, which is quite adequate for many
metallurgical applications.   The design and construction of such
generators is reviewed.   The parallel inverter type of circuit
is commonest and when self-excited its performance depends mainly
on the parameters of the phase-regulator and little on the Q-value
of the load; in induction heating this is the particular advantage
of the circuit over the parallel inverter with independent
excitation, though independent excitation may be used to
facilitate starting.   The series/parallel inverter has a
capacitor in series with the load which increases the blocking
angle but unfortunately also increases the peak value of the anode

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Medium-frequency ionic ...

S/105/62/000/007/003/004
E194/E455

voltage.   Several variants of series-parallel inverter are
described.   The grid circuit design determines the deionization
process, which usually imposes limitations on the output frequency;
design features that can increase this frequency are reviewed.
For example, while the inverse voltage is on the anode, the grid
resistance may be shunted by a special electronic-impulse device,
which permits the output frequency to be raised without also
increasing the grid current.   The frequency may be raised by a
suitable choice of method of connecting the secondary of the grid
transformer to the valves.   The blocking angle may be increased
artificially by connecting saturating chokes in series with the
valves and RC circuits in parallel.   Considerable increase of
frequency is possible with multi-stage generators and frequency-
doubling circuits are described.   The operation of damped-wave
impulse type are particularly suitable.   Available valves and
their design are described; the best existing types are
ТР1-6/15 (TR1-6/15) and ТР1-15/15 (TR1-15/15).   Their control
grid recovery time is not greater than 50 microseconds and they
have been used in prototype damped-wave impulse generators of
Card 2/3

Medium-frequency ionic ...

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E194/E455

40 kW and 10 kc/s.   Double-grid mercury thyratrons have been
developed at the Leningradskiy elektrotekhnicheskiy institut
im. Ul'yanova (Lenina) (Leningrad Electrical Engineering
Institute imeni Ul'yanov (Lenin)).   Hydrogen thyratrons have the
best frequency characteristics but the permissible d.c. component
of anode current is low and both the gas-filled and the hydrogen
types have short life.   Mercury ignitrons and excitrons look
most promising in this respect and some recent designs are
described.   Although promising prototypes have been made,
regular production of new valves is lagging and this hinders the
development of induction heating.   Westinghouse "Trinistors" are
described.   Semiconductor devices have little overload capacity
and accordingly the associated circuitry is complicated by the
need for protective devices.   There are 6 figures.

SUBMITTED: February 8, 1962

Card 3/3

DONSKOY, A.V., doktor tekhn.nauk; IVENSKIY, G.V., kand.tekhn.nauk

Characteristics of a parallel inverter with self-excitation and induction heating. Vest.elektroprom. 33 no.4:39-43 Ap '62.
(MIRA 15:4)

(Electric current converters)

DONSKOY, A.V., doktor tekhn. nauk; IVENSKIY, G.V., kand. tekhn. nauk

Transistor wattmeter for high-frequency systems. Elektrotekhnika
35 no.7:44-46 '64.   (MIRA 17:11)

L 27976-66   EWT(m)/T   DJ

ACC NR: AP6017733   SOURCE CODE: UR/0066/65/000/006/0048/0049

AUTHOR: Ivenskiy, Ya. B.

ORG: Leningrad Repair and Assembly Combine of the "Rostorgmontazh" Trust
(Leningradskiy remontnomontazhnyy kombinat tresta Rostorgmontazh)

TITLE: Bellowsless gland with steel-to-steel friction rings \\

SOURCE: Kholodil'naya tekhnika, no. 6, 1965, 48-49

TOPIC TAGS: gas compressor, freon, refrigeration equipment, steel, metal heat
treatment

ABSTRACT: The Leningrad Repair and Installation Combine has developed bellowsless
packing glands with steel-steel friction rings, designed to replace the unreliable
bellows glands in small freon compressors in IF and FAK refrigeration units. A
friction ring attached to the rotating compressor shaft is spring-pressed onto a
stationary friction ring in the gland, made of steel of different hardness, so
provided by proper heat treatment of the metal. Both rings are rubber-buffered
in their mountings. Production of the new units allows a savings of 50% in cost
over the old bellows type. Orig. art. has 1 figure. [JPRS]

SUB CODE: 13 / SUBM DATE: none

Card 1/1   UDC: 62-223

IVENSKIY, Yu.N., inzh.; TULLER, A.G., inzh.

Designing control systems with weak-current equipment. Mash.
Bel. no.2:54-60 '60.   (MIRA 16:7)

(Electric controllers)

IVENSKIY, Yu. N., TULLER, A.G.

Installing the electric equipment of automatic machine-tool
lines. Stan.i instr. 31 no.4:29-31 Ap '60.   (MIRA 13:6)
(Electric wiring)

S/110/60/000/009/008/008
E194/E455

9.2140

AUTHORS: Ivonskiy, Yu.N., Engineer and Tuller, A.G., Engineer

TITLE: Improving the Reliability of Relay-Contact Control
             Circuits

PERIODICAL: Vestnik elektropromyshlennosti, 1960, No.9, pp.65-68

TEXT: For many types of control circuit the ordinary a.c. relay
using relatively heavy currents has numerous disadvantages.   This
is particularly so when the number of contacts in the system runs
into hundreds.   The number of switching elements required to
carry out executive functions in a control system is usually quite
small; most of the switching elements handle the main functional
relationships, requiring only signals of low power.   Accordingly
it is advisable to subdivide the system into two parts, one for
control and the other executive.   Several types of communication
relay are recommended for use in circuits of this kind.   When
communication equipment is used, the structure of the control
systems can be greatly simplified and contact wear can be reduced,
The tendency to reduce the number of contacts leads to the
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S/110/60/000/009/008/008
E194/E455

Improving the Reliability of Relay-Contact Control Circuits

application of new elements and new methods of constructing relay
control circuits.   Semiconductor instruments of small size are
particularly valuable.   When a number of contacts of a given type
but in different circuits are connected in parallel, they can easily
be unified by the use of a valve.   Typical circuits for this case
are given.   By using additional resistances it is possible to
combine the functional possibilities of normally-open and normally-
closed contacts.   In order to use additional resistances so as to
reduce the number of contacts, certain equivalent circuits must be
considered.   A number of relationships that such equivalent
circuits must observe are stated.   Examples are then given of the
use of additional resistors and equivalent circuits to cut down
the number of contacts.   The conditions of use of the apparatus
and contacts in the circuits have a considerable influence on the
reliability.   Various arc-extinguishing circuits may be used,
It is important to protect the circuit elements correctly.
Protection of d.c. control circuits containing elements of very
different ampere-second characteristics makes it necessary to break
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E194/E455

Improving the Reliability of Relay-Contact Control Circuits

down the control circuit into individual parts consisting of
switching elements of approximately equal ampere-second
characteristics.   A typical control circuit arranged in this way
is described.   There are 6 figures.

SUBMITTED: December 10, 1959

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S/121/60/000/011/002/013
A004/A001

AUTHORS: Ivenskiy, Yu. N., Tuller, A. G.

TITLE: Check and Interlock Systems in Automatic Machine Tool Lines
              31   14

PERIODICAL: Stanki i Instrument, 1960, No. 11, pp. 3-5

TEXT: The authors present a survey of various check and interlock systems
which are used for automated machine tools and transfer lines and point out that,
although there is a great variance of such systems, they can be divided into three
main groups: 1) Devices checking the location of individual objects and permitt-
ing their reciprocal displacement only under certain conditions. 2) Devices
checking the state of objects or line apparatus (e. g. line speed, pressure of
pneumatic or hydraulic systems etc.). 3) Devices for the measurement check of
components being machined. The SKB-8 of the Minskiy zavod avtomaticheskikh liniy
(Minsk Plant for the Manufacture of Automatic Transfer Machine Lines) uses for
their checking and interlock systems to a great extent electronic units: resistors,
capacitors, transistors and triodes, which makes it possible to build highly
reliable miniature systems. The use of amplifiers on the base of these elements
enables the requirements towards pickups as to their sensitivity and amplification
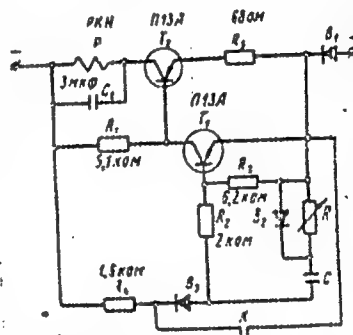
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S/121/60/000/011/002/013
A004/A001

Check and Interlock Systems in Automatic Machine Tool Lines

coefficient to be considerably lowered. The SKB-8 has developed transistor-type miniature static time relays which make it possible to obtain a time delay during the switching on or off. The command of relay operation is given in the normally open or normally closed state by the controlling contact. Figure 1 shows the circuit of a switch-off time-delay relay, where the telephone relay P is located in the triode collector circuit T. This relay is nor-
mally switched on, since the triode is open. Figure 2 shows a switch-on time-delay relay composed of the tri-odes T_1 and T_2. The maximum time-delay errors at temperature variations in the range of 0 to 45°C do not exceed $\pm$ 11% relative to the delay whose magnitudes are shown in tables 1 and 2. When the switch-on time-delay relay is supplied from a source with a 3-phase rectify-ing circuit the maximum error does not exceed $\pm$ 4%. The SKB-8 has developed a simple device to check the tool wear, which is based on a step-by-step selector. Figure 3 shows the electric circuit of the tool wear
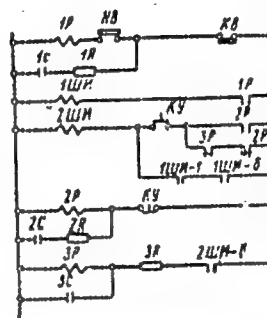
Figure 2:

. Card 2/5

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A004/A001

Check and Interlock Systems in Automatic Machine Tool Lines

check device which effects the displacement of the step-by-step selectors, signal transmission and setting of the control selector on any number of cycles. The 1ШИ (1ShI) reference input selector is switched on by the 1P (1R) relay which in turn, is switched on if the tool presses on the terminal switch KЗ (KV). At a given position of the 1ShI reference input selector, it switches on the 2ШИ (2SnI) slave selector acting on a signal lamp. After another revolution of the reference input selector the line is stopped. The use of tools which are by their special characteristics more subjected to break-downs has to be checked in a most efficient way. For this purpose transistor-type amplifiers have been developed. The electric contact between gage feeler and end of the checked tool (drill) is used as pickups. Owing to the high amplification coefficient a soiling of the contact spot or even the pressing stress of the gage feeler on the drill do not play any rôle. Figure 4 shows the amplifier circuit for the checking of breakdowns of two drills used in one machine tool. Relay P is switched on and permits the line
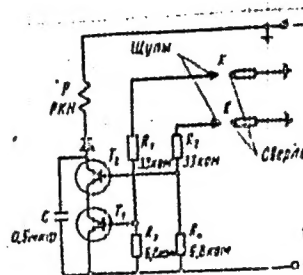
Figure 3:

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A004/A001

Check and Interlock Systems in Automatic Machine Tool Lines

to operate only in that case if there is a contact between the gage feelers and the two drills. At a temperature of 40° and a voltage increase by 25% relative to the 24 v standard voltage, the maximum current passing through the gage feelers does not exceed 0.9 milliampere. If there is no contact between one gage feeler and tool the current passing through the relay does not exceed 0.5 milliampere, while in the case of the two contacts existing, at a temperature of 15° and a lowering of the voltage by 15%, the current magnitude amounts to not less than 11 milliampere which is sufficient to operate the type РКН (RKN) relay. For dimensional checks of machined components the models БВ-779 (BV-779U) and БВ-634 (BV-634U) electrocontact pickups have been widely used. Figure 5 shows the two-stage semiconductor amplifier for the electrocontact pickups and the amplifier circuit. These pickups ensure high-precision measurement and permit on their contacts a load of

Figure 4:

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87949
S/121/60/000/012/001/015
A004/A001

9.6000

AUTHORS: Ivenskiy, Yu. N., Tuller, A. G.

TITLE: The Alarm System in Automatic Transfer Lines

PERIODICAL: Stanki i Instrument, 1960, No. 12, pp. 1-3

TEXT: The authors describe and comment on some alarm systems in automatic
transfer lines devised for the quick and exact location of defects. They point
out that these alarm systems can be greatly simplified by using weak-current
relays and electronic devices in low-voltage d-c circuits. Flashing lights which
start to operate on the signal of the alarm detector are much more effective than
the ordinary lights which normally
burn half-incandescent and start to   Figure 1:   Figure 2:
burn with a bright light if a defect
occurs. Figure 1 shows the circuit
of a delayed pulse-couple of flashing
light. The use of flashing light
extends the functional possibilities
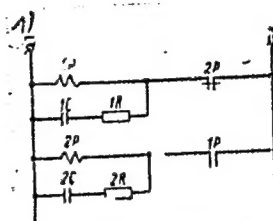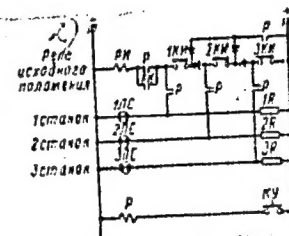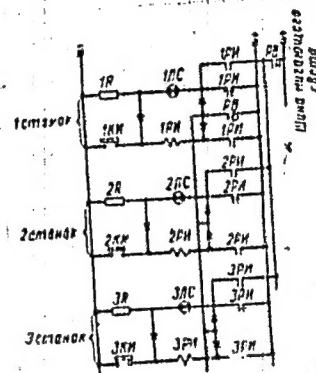of indicator lights, since in this

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S/121/60/000/012/001/015
A004/A001

The Alarm System in Automatic Transfer Lines

case the pilot lamps can burn in the following three stages: 1. half-indandescent burning proving the intactness of the lamps; 2. fully incandescent burning showing the normal state of the unit being checked; 3. flashing-light burning indicating a defect in the controlled unit. Figure 2 shows a circuit developed by the SKB-8 of the Minskiy zavod avtomaticheskikh liniy (Minsk Plant of Automatic Transfer Lines) for the control and signalling of the initial position taken only by one normally open contact of the terminal switches of   Figure 3: the machines. Two intermediate relays are used independently of the number of machines being controlled. The control of the participation of the machine in the preceding cycle is effected either as a control of the termination of the machining process of the component or, in the time function, as a control of the beginning of the cycle. The circuit shown in Figure 3 combines the control of the initial position and participation of the machine in the preceding cycle. This circuit operates in such a way that the pilot lamps are burning half-incandescent if the machine is not in the initial position, while the lamps are burning brightly if the machine is

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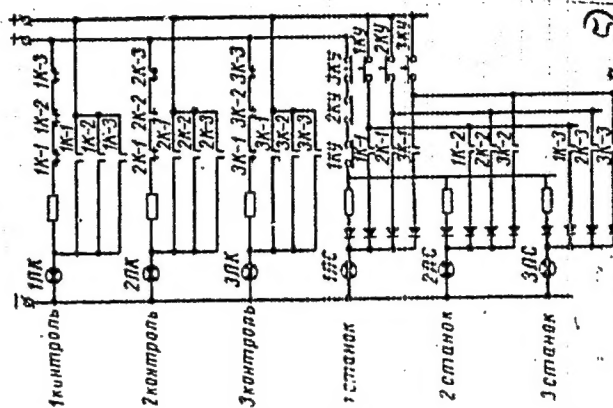
The Alarm System in Automatic Transfer Lines

the fixed position of the movable units, while the half-incandescent burning lamps
indicate those motions, delays or stops which in the intermediate position caused
the line being stopped. A great number of signalling lamps on the central control
panel renders observation difficult. One efficient way of reducing the number of
lamps is to use the ПП-36 (PP-36) slide switch. In this case the lamps located on
the panel pertain only to one machine

Figure 5:

tool, while the selection of the
machine tool is carried out by the
slide switch. An easy-to-watch
alarm system is obtained according
to the circuit shown in Figure 5.
In the case of a great number of
control devices only one lamp 1LS,
2LS, 3LS, is fitted for each machine
tool. These lamps generally burn
half-incandescent. A number of
buttons 1КУ (1KU), 2KU, 3KU ect.,
depending on the number of units and
operations being controlled, are

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Card 5/5